Back pain, mechanical musculoskeletal problems, local soft tissue disorders

**REFERENCES:**


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**THU0482**

**HUMAN LUMBAR SPINE FACET JOINT OSTEARThritis displays predominant NGF expression and signaling in capsular synovium and subchondral bone marrow tissues independent of osteoarthritIs grade**

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**Background:** Increased nerve growth factor (NGF) levels are associated with chronic pain conditions, including low back pain and osteoarthritis (OA). NGF signalling through its receptor TrkA regulates pro-inflammatory neurotransmitters such as substance P (SP). Inhibition of NGF has shown therapeutic efficacy in knee OA, which have shown osteochondral NGF expression as a biomarker for OA. NGF signalling in facet joints (FJOA) of the lumbar spine and their association with FJOA grade.

**Methods:** FJOA specimens were obtained by facetectomy from patients undergoing intervertebral fusion (n=10, average age 69 years, 5 males). FJOA severity and presence of synovial hypertrophy was graded using a modified numerical rating scale (0-3). Relative abundance of macrophages and NGF was strongly correlated in synovial (SY), cartilage (CL), subchondral bone (SB) and subchondral bone marrow (BM). NGF, CD68 (macrophages), TrkA and substance P (SP) expression was determined using immunohistochemistry. Association between imaging parameters and tissue expression was determined using Pearson correlation analysis.

**Results:** Synovial hypertrophy as determined by MRI was present in six cases (60%) and median Weishaupt grade of FJOA was 2 (IQR 1.5-3). FJOA severity and presence of synovial hypertrophy was graded using a modified numerical rating scale (0-3). Relative abundance of macrophages and NGF was strongly correlated in SY tissue only (r=0.78). NGF expression was determined using Pearson correlation analysis. Association between imaging parameters and tissue expression was determined using Pearson correlation analysis.

**Conclusion:** NGF expression and signalling is evident in lumbar spine FJOA specimens, but not strongly associated with synovial hypertrophy or disease severity. These results are in agreement with recent studies of human knee OA, which have shown osteochondral NGF expression as a hallmark of symptomatic OA independently of chondroplasty or synovitis.

**REFERENCES:**


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**THU0483**

**DEMOGRAPHICS AND CLINICAL CHARACTERISTICS OF A NATIONAL COHORT OF 280 PATIENTS WITH JOINT HYPERMOBILITY SYNDROME. SOCIOECONOMIC BURDEN AND THE PERFORMANCE OF THE 2017 INTERNATIONAL CLASSIFICATION CRITERIA OF THE EHLERS DANLOS SYNDROMES**

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**Background:** Joint hypermobility syndrome (JHS) encompasses a spectrum ranging from asymptomatic joint hypermobility through to Ehlers Danlos syndromes (EDS) including hypermobile EDS (equivalent to the former diagnosis of EDS type 3). Many EDS patients have significant musculoskeletal pain and other systemic comorbidities including autonomic, bowel and bladder dysfunction. We present data from a cohort of patients with JHS referred to our tertiary centre from December 2015 to May 2017.

**Objectives:** To increase the awareness of the hypermobility syndrome among general rheumatologists and other health professionals.

To assess the impact of this condition on the patient general health and their work disability.

To reflect on the 2017 Ehlers Danlos International Criteria.

**Methods:** We undertook a retrospective analysis of medical records. Statistical analysis utilised non-parametric Chi squared analysis for between group comparisons.

**Results:** There were 280 patients: 253 patients (90%) were female and 27 were male (10%) with a female to male ratio of 9:1. The age distribution was from 18 to 66 (mean age 42 years). The age at which they were first diagnosed ranged from 4 to 55 (mean age 29 years); 279 (96%) had Ehlers Danlos Syndrome type 3, one patient had Marfan’s, one Kyphoscoliotic EDS, and two patients had Tenascin X deficiency.

**Conclusion:** Joint hypermobility syndrome is common and has significant impact on general health and work disability.

**Disclosure of Interests:** None declared.

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ESTIMATION OF PATIENT ACCEPTABLE SYMPTOM STATE FOR PATIENT-REPORTED OUTCOMES BETWEEN 2 POPULATIONS OF PATIENTS WITH NON-SPECIFIC CHRONIC LOW BACK PAIN

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Background: Clinical relevance of commonly used patient-reported outcomes (PROs) is unclear in people with non-specific chronic low back pain (cLBP) (1). The aim of this analysis is to demonstrate the effects of Extracorporeal shock wave therapy (ESWT) in patients with shoulder calcific tendinitis with inefficient response to local steroid injection. Methods: We enrolled 80 patients with rheumatoid arthritis. Screening with the DN4 neuropathic pain questionnaire showed that 31% of patients (n=25) had a neuropathic pain component (NP-C+), DN4-4 points. Mean age was 57.0 ±7.49 years, disease duration - 9.87 ± 9.5 years, DAS28 disease activity - 5.5 ± 1.3, VAS pain intensity - 73.1 ± 17.4. All patients were randomized into two groups: group I received pregabalin in combination with DMRDs; group II received DMRDs only. All patients underwent a clinical and neurological examination, disease activity was assessed with the DAS28 index, the effect of treatment on neuropathic pain was assessed with the DN4 and Pain DETECT questionnaires, pain intensity at rest – with the VAS scale. Results: There were no significant differences between groups before the start of the study (Table 1).


PREGABALIN EFFICACY IN THE TREATMENT OF CHRONIC PAIN IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Methods: 2-year data of shoulder outpatient clinic were scanned. 10 patients with shoulder calcific tendinitis without satisfying response to local steroid injection (less than 50% decrease in pain visual analogue scale (VAS) score) who were treated with ESWT were reviewed. Results: 10 patients (9 women, 1 man) fulfilled the inclusion criteria. The mean patient age was 51.3 years (range, 32-70 years) and body mass index was 26.2 kg/m2. The affected shoulder was left in 6 (60%) patients and right in 4 (40%). The calcific tendinitis involved the dominant side in 5 (50%) patients and non-dominant side in other 5 (50%). All patients had one percutaneous local steroid injection-2 ml 2% prilocain and 1 ml steroid (5 mg of betamethasone dipropionate + 2 mg betamethasone sodium phosphate). Mean time from symptom onset to the ESWT treatment was 3.5 weeks (range, 2-6 weeks). Mean VAS score was 9 and Shoulder Disability Index (SDI) score was 84.4 before ESWT treatment. ESWT treatment Elmed-Vibrolith ver.3.0 was used in the treatment, each treatment consisted 2000 shocks with a frequency of 150 shocks a minute with maximum tolerable energy density (range, 3.2-3.4 bar). Mean ESWT session was 3.3 (3 patients had 3, 1 patient had 4 and 1 patient had 5 sessions of treatment). Mean post-treatment VAS score was 4.2 (53.3% decrease) and SDI score was 43.8 (48.1% decrease) which were evaluated after the last ESWT session.

Conclusion: With its good tolerance and safety, ESWT might be an alternative treatment method for calcific tendinitis of the shoulder. Although limited number of patients, we hope that this study might give rise to future randomized-controlled studies about the efficacy of ESWT in acute/subacute shoulder calcific tendinitis.

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PREDICTIVE FACTORS OF INFECTION IN PATIENTS WITH CHRONIC PAIN ON TREATMENT WITH ELECTROHYDRODYNAMIC RHEUMATOID ARTHRITIS

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Methods: We included 256 patients: 135 patients with cLBP and without active discopathy participated in a randomized controlled trial comparing glucocorticoid intra-articular injection compared to contrast alone (2), and 121 patients with cLBP and active discopathy participated in a randomized controlled trial assessing ESWT in patients with shoulder CT with inefficient response to local steroid injection. Positive dynamics of VAS pain intensity was observed in both groups (Fig. 1) (77.0 ± 13.5 vs 75.2 ± 14.7, at week 2 48.8 ± 14.2 vs 72.9 ± 14.1).